

Table 7 gp41

Location	WEAU	Sequence	Immunogen	Species(HLA)	References
gp41(557-565 IIIB)	gp41(47-55)	RAIEAQHQHL	HIV-1 infection	human(?)	[Wilkes et al.(1996)]
		• Epitope defined in the context of the Pediatric AIDS Found. ARIEL project mother-infant HIV transmission study			
		• RAIDAQQHL and RVIEAQHQHL, naturally occurring variants, were found in mother and are recognized			
gp41(557-565 IIIB)	gp41(47-55)	RAIEAQHQHL	HIV-1 infection	human(B51)	[Sipsas et al.(1996)]
gp41(572-590 BRU)	gp41(62-80)	GIKQLQARILAVERY-LKDQ	rgp160 BRU vaccine	human(DPw4.2)	[Hammond et al.(1991)]
		• CD4+ CTL; I(9) to V and K(17) to R blocks T cell receptor binding			
gp41(575-599 IIIB)	gp41(65-89)	QLQARILAVERYLKD-QQLGIWGCS	HIV-1 infection	human(B14)	[Jassoy et al.(1992)]
		• Epitope recognized by CTL clone derived from CSF			
gp41(583-592 PV22)	gp41(73-82)	VERYLKDQQQL	HIV-1 infection	human(B14)	[Jassoy et al.(1993)]
		• HIV-1 specific CTLs release γ -IFN, and α - and β -TNF			
gp41(584-592)	gp41(74-82)	ERYLKDKQQQL	HIV-1 infection	human(?)	[Price et al.(1995)]
		• Study of cytokines released by HIV-1 specific activated CTL			
gp41(584-592 PV22)	gp41(74-82)	ERYLKDKQQQL	HIV-1 infection	human(B14)	[Johnson et al.(1992)]
		• Two overlapping CTL epitopes with different HLA restriction			
gp41(584-592 PV22)	gp41(74-82)	ERYLKDKQQQL	HIV-1 infection	human(B14)	[Jassoy et al.(1993)]
		• HIV-1 specific CTLs release γ -IFN, and α - and β -TNF			
gp41(584-592,HXB2)	gp41(74-82)	ERYLKDKQQQL	HIV-1 infection	human(B14)	[Kalams et al.(1994)]
		• Longitudinal study of T cell receptor usage in a single individual			
gp41(584-592)	gp41(74-82)	ERYLKDKQQQL	no CTL shown	human(B14)	[DiBrino et al.(1994a)]
		• Epitope studied in the context of HLA B14 binding			
gp41(584-592)	gp41(74-82)	ERYLKDKQQQL	HIV-1 infection	human(B14)	[Hammond et al.(1995)]
		• This peptide can be processed for HLA-B14 presentation in a TAP-1/2 independent pathway			
gp41(586-593)	gp41(76-83)	YLKDQQQL	HIV-1 infection	human(B8)	[Johnson et al.(1992)]
		• Two overlapping CTL epitopes with different HLA restriction			
gp41(586-593)	gp41(76-83)	YLKDQQQL	no CTL shown	human(B8)	[Sutton et al.(1993)]
		• Predicted epitope based on B8 binding motifs, from larger peptide QLQARILAVERYLKDQQQLGIWGCS			
gp41(584-591 NL43)	gp41(76-83)	YLKDQQQL	HIV-1 infection	human(A24)	[Dai et al.(1992)]
		• The lysine (K) is critical for eliciting a HLA A24 CTL response			
gp41(605-615 LAI)	gp41(96-104)	TAVPNASW	gp160 vaccinia	human(B35)	[Johnson et al.(1994b)]
		• Epitope for vaccine induced CD8+ clone			

HIV CTL Epitopes

Location	WEAU	Sequence	Immunogen	Species(HLA)	References
gp41(606-614 LAI)	gp41(96-104)	TAVPWNASW	gp160 vacc vaccine	human(B35)	[Johnson et al.(1994a)]
			• HLA restricted CTL response to epitope in HIV-1 vaccinia-env vaccines		
gp41(606-614 LAI)	gp41(96-104)	TAVPWNASW	gp160 vaccinia vaccine	human(B35)	[Hammond et al.(1995)]
			• Peptide processed by a TAP-1/2-dependent pathway only		
gp41(606-614 HXB2)	gp41(96-104)	TAVPWNASW	synthetic peptide	human(B*3501)	[Ferris et al.(1996)]
			• Natural form of this peptide is not glycosylated, suggesting initial Class I processing may occur in the cytosol		
gp41(701-720 BH10)	gp41(191-210)	VLSIVNRVRQGYSPL-SFQTH	HIV-1 infection	human(A32)	[Safrit et al.(1994a)]
			• Recognized by CTL derived from acute seroconverter		
gp41(747-755)	gp41(237-245)	RLVNGSLAL	HIV-1 infection	human(A2)	[Parker et al.(1992)]
			• Studied in the context of HLA A2 peptide binding		
gp41(606-614 LAI)	gp41(257-270)	SYHRLRDLLLIVTR	HIV-1 infection	human(A31)	[Hammond et al.(1995)]
			• Peptide processed by a TAP-1/2-dependent pathway only		
			• CTL from an acute seroconverter		
gp41(769-777 BH10)	gp41(259-267)	HRLRDLLLI	HIV-1 infection	human(?)	[Safrit et al.(1994a)]
			• Recognized by CTL derived from acute seroconverter		
gp41(768-778 NL43)	gp41(260-270)	RLRDLLLLIVTR	HIV-1 infection	human(A3.1)	[Takahashi et al.(1991)]
			• CD8+ T cell clone; not cross-reactive with MN		
gp41(770-780 BH10)	gp41(260-270)	RLRDLLLLIVTR	HIV-1 infection	human(A31)	[Safrit et al.(1994a), Safrit et al.(1994b)]
			• Recognized by CTL derived from acute seroconverter		
gp41(788-809 HXB2)	gp41(271-292)	IVELLGRRGWEALKY-WWNLLQY	HIV-1 infection	human(B27)	[Lieberman et al.(1992)]
			• CTL epitope defined by T cell line, not clones, and peptide mapping		
gp120(788-809)	gp41(271-292)	IVELLGRRGWEALKY-WWNLLQY	HIV infection	human(?)	[Lieberman et al.(1995)]
			• HIV-specific CTL lines developed by <i>ex vivo</i> stimulation with peptide		
gp41(791-799 LAI)	gp41(276-284)	GRRRGWEALK	HIV-1 infection	human(B27)	[McMichael & Walker(1994)]
			• Review of HIV CTL epitopes; defined by B27 motif found within a larger peptide		
			• Also: J. Liebermann 1992 and pers. comm. J. Liebermann		
gp41(802-823 HXB2)	gp41(285-306)	YWWNLLQYWSQLKN-SAVNLLN	HIV-1 infection	human(?)	[Lieberman et al.(1992)]
			• CTL epitope defined by T cell line, not clones, and peptide mapping		
gp41(814-823 LAI)	gp41(303-312)	SLLNATDIAV	MN rec gp160	human(A2)	[Dupuis et al.(1995)]
			• Of two CTL clones, one reacted only with 815-823, the other with 814-823 and 815-823		
gp41(815-823 LAI)	gp41(304-312)	LLNATDIAV	MN rec gp160	human(A2)	[Dupuis et al.(1995)]
			• Of two CTL clones, one reacted only with 815-823, the other with 814-823 and 815-823		

HIV CTL Epitopes

Location	WEAU	Sequence	Immunogen	Species(HLA)	References
gp120(844-863)	gp41(327-346)	YRAIRHIPRRIRQGL- ERILL	HIV infection	human(?)	[Lieberman et al.(1995)]
		• HIV-specific CTL lines developed by <i>ex vivo</i> stimulation with peptide			
gp120(844-863 LAI)	gp41(327-346)	YRAIRHIPRRIRQGL- ERILL	HIV-1 infection	human(B35)	[Shankar et al.(1996)]
gp41(834-848 IIIB)	gp41(317-331)	DRVIEVVQGAYRAIR	vaccinia IIIB gp160	murine(H-2 ^{d,p,u,q})	[Shirai et al.(1992)]
		• In a murine system multiple class I molecules can present to CTL			
gp41(834-848 IIIB)	gp41(317-331)	DRVIEVVQGAYRAIR	HIV exposure	human(?)	[Pinto et al.(1995)]
		• CTL and T helper cell reactivity in health care workers exposed to HIV			
gp41(834-848 IIIB)	gp41(317-331)	DRVIEVVQGAYRAIR	HIV-1 infection	human(A2)	[Clerici et al.(1991)]
		• Helper and cytotoxic T cells can be stimulated by this peptide (Th4)			
gp41(829-837 LAI)	gp41(318-326)	RVIEVLQRA	MN rec gp160	human(A2)	[Dupuis et al.(1995)]
		• CTL from HLA-A2 positive subject react with this peptide; peptide binds to HLA A*0201 with high affinity			
gp41(831-853)	gp41(320-344)	IEVVQGAYRAIIRHI- PRRIRQGLERI	HIV-1 infection	human(?)	[Price et al.(1995)]
		• Study of cytokines released by HIV-1 specific activated CTL			
gp41(844-863 HXB2)	gp41(327-346)	YRAIRHIPRRIRQGL- ERILL	HIV infection	human(B8)	[Lieberman et al.(1992)]
		• CTL epitope defined by T cell line, not clones, and peptide mapping			
gp41(848-856 LAI)	gp41(333-341)	IPRRIRQGL	?	human(B7)	[Brander & Walker(1995)]
		• Epitope defined in the context of the Pediatric AIDS Found. ARIEL project mother-infant HIV transmission study			
gp41(852-863 HXB2)	gp41(335-346)	RRIRQGLERILL	HIV-1 infection	human(A30,B8)	[Lieberman et al.(1992)]
		• CTL epitope defined by T cell line, not clones, and peptide mapping			
gp41(852-863 LAI)	gp41(335-346)	RRIRQGLERILL	HIV-1 infection	human(B7)	[Shankar et al.(1996)]